August 9, 2005

Arthur Neal
Director, Program Administration
National Organics Program
USDA-AMS-TMP-NOP
1400 Independence Ave., SW
Room 4008 So., Ag Stop 0268 **Docket No. TM-04-07**

Washington, D.C. 20250

Dear Mr. Neal:

SUBJECT: PETITION TO REMOVE THE PROHIBITION FOR USE OF CALCIUM CHLORIDE AS A SOIL APPLIED NON-SYNTHETIC SUBSTANCE IN ORGANIC CROP PRODUCTION

On behalf of TETRA Technologies, Inc., I submit herewith for the review and consideration of the National Organics Program, a petition to remove the prohibition for use of calcium chloride as a soil applied, non-synthetic substance in organic crop production. This petition is in response to your Federal Register Notice of June 17, 2005 requesting comments on products due to sunset October 21, 2007. I do wish to present several points about the use of calcium chloride and benefits to organic agriculture:

- Organic agriculture has very few effective products that can be used as sources of natural chemical or mineral nutrition. Both calcium and chlorides are recognized as essential to plant growth. The form of calcium chloride proposed by TETRA is a soluble source allowing plants ready access to chlorides as well as providing free calcium to liberate sodium from the soil system. It is also naturally derived from salt mines where a brine process is used to extract the calcium chloride.

- Potassium chloride is presently allowed as a soil application. Yet, calcium chloride is restricted. For scientific consistency it would seem valid to treat soil applications of the calcium and potassium chloride products equally. Based upon soil/chemical interactions, it is more logical to allow calcium chloride as a soil application over potassium chloride. High amounts of potassium are known to create soil problems (soil dispersion) if not managed correctly. In fact, calcium chloride applications (flocculation of soil), where potassium chloride has been applied in excess, could counteract the excess potassium if good management practices are followed. We do not advocate removal of potassium chloride as a soil amendment. Rather, we believe both have a very useful part to play in organic agriculture.

- Chlorides will cause severe toxicity when plants receive an excessive amount. As with any application of organic or inorganic materials, management of applied products together with knowledge of the treated soil averts toxicity problems. It's still really a matter of "the dose makes the poison". I am more concerned about chloride buildup on soils from the application of materials of marine origin such as the blue green algae, sea kelp, and sea weed.

- In searching the literature, we can find no real concern over the use of calcium chloride as a soil amendment. OMRI originally approved it as both a soil and foliar nutrient but withdrew the soil approval when the prohibition appeared in the NOP list. In searching various data bases, I cannot find any scientific data to suggest a managed use of calcium chloride would be detrimental to plant growth and cause chloride build up in soils. In fact, contrary data are more prevalent in the literature.

- Soil applied CaCl is more effective applied as a soil treatment than as a foliar treatment when used for salt remediation and to provide a source of free calcium in the soil solution. In practice, it takes more CaCl applied as a foliar application to achieve the same results as a soil application.

Should you have questions or need additional information, please contact me by telephone at 559.297.9322 or by e-mail at robertehn@sbcglobal.net. I also encourage you to contact Dr. Tom Ruehr at Cal Poly State University in San Luis Obispo, CA or Dr. Suren Mishra at TETRA Technologies. A petition to remove the prohibition was submitted to NOP on January 27, 2005. To date we have had no response from our submission.

Sincerely,

Robert C. Ehn
Regulatory Agent/Consultant
for TETRA Technologies

Enclosure (1)

cc: Mr. Charles Chandler, TETRA Technologies Inc., The Woodlands, TX